Amendments to the Claims: This listing of claims will replace all prior versions, and listings, of claims in the application

Listing of Claims:

1.-12. (Cancelled)

13. (Currently Amended) A data transmission apparatus, comprising:

time intervals generating means which ~~creates~~generates predetermined time ~~of day~~interval information;

outputting means which outputs a series of data frames as stream data based on said generated predetermined time interval information;

buffering means which stores said output stream data and said generated predetermined time interval information;

sending means which divides said ~~series of data frames forming said stream~~stored stream data into packet data and sends said packet data; and

transmission managing means which ~~manages said outputting means and said sending means,~~

~~characterized in that said transmission managing means~~ enters said stored stream data to said sending means based on said stored predetermined time ~~of day~~interval information.

14. (Currently Amended) The data transmission apparatus of Claim 13, ~~characterized in that~~ wherein said predetermined time ~~of day~~interval information is set up to correspond to necessary timing ~~which is needed by an apparatus which receives packet data of said series of data frames~~.

15. (Currently Amended) The data transmission apparatus of Claim 14, ~~characterized in that~~ wherein said necessary timing is based on a frame frequency of said series of data frames.

16. (Currently Amended) The data transmission apparatus of any one of Claims 13 through 15, ~~characterized in that~~ wherein said transmission managing means provides said time intervals generating means with a correction instruction which is for correcting said predetermined time ~~of day~~interval information in accordance with a condition of burden upon said sending means,

and said time intervals generating means ~~creates~~generates said predetermined time ~~of day~~interval information without receiving the correction instruction or considering the correction instruction.

17. (Currently Amended) The data transmission apparatus of any one of Claims 13 through 15, ~~characterized in that~~ wherein said transmission managing means does not provide said time intervals generating means with a correction instruction which is for correcting said predetermined time ~~of day~~interval information in accordance with a condition of burden upon said sending means.

18. (Currently Amended) The data transmission apparatus of any one of Claims 13 through 15, ~~characterized in that~~ wherein said predetermined time ~~of day~~interval information ~~time~~ is expressed as groups of ~~the~~a start time and ~~the~~an end time of said data frames.

19. (Currently Amended) The data transmission apparatus of any one of Claims 13 through 15, ~~characterized in that~~ wherein said stream data are data for a digital VCR ~~for consumer use~~.

20. (Cancelled)

21. (Currently Amended) The data transmission apparatus of any one of Claims 13 through 15, ~~characterized in that~~ wherein said outputting means reproduces data for a digital VCR ~~for consumer use~~.

22. (Currently Amended) A data transmission apparatus, comprising:

data conversion means comprising:

packet generating means which divides ~~inputted~~input stream data and adds header information to each piece to ~~thereby obtain~~ produce packets~~,~~; and

packet processing start time inserting means which inserts calculated packet processing start time information ~~which is for the data receiving side~~ into the header information of at least a first packet of each frame of said stream data, ~~and thereafter outputs~~said data conversion means outputting the packets produced by said data conversion means; and

an interface comprising:

transmission start time controlling means which~~,~~ ~~using a clock, outputs~~controls transmission start time based on said packet processing start time information, said interface outputting to a bus the packets processed by said data conversion means~~,~~ at ~~the~~said transmission start time ~~which corresponds to said packet processing start time information~~,

~~characterized in that the~~wherein said packet processing start time information of ~~said packets~~ the first packet of each frame of said stream data is expressed by:

$$T1 = X + Z + Y (N - 1),$$

(where $X >= 0$, $Z >= 0$) ~~assuming that~~ X denotes the transmission start time for the first packet of the first frame, N denotes a frame number, Y denotes a frame period, Z denotes an initial value, and T1 denotes the processing start time of said packets.

23. (Currently Amended) The data transmission apparatus of Claim 22, ~~characterized in that~~wherein said bus is an IEEE1394 bus, and said interface is an IEEE1394 interface.

24. (Currently Amended) The data transmission apparatus of Claim 22 or 23, ~~characterized in that~~wherein said stream data are data for a digital VCR ~~for consumer use~~, said Z is a value around 250 microseconds, and said Y is a value which is based on a frame frequency of said stream data.

25. (Previously Presented) A medium which can be processed on a computer and which carries a program and/or data for making a computer execute all or some functions of all or some means of the data transmission apparatus of any one of Claims 13 through 15 or 22 or 23.

26. (Previously Presented) An aggregation of information which is a program and/or data for making a computer execute all or some functions of all or some means of the invention according to any one of Claims 13 through 15 or 22 or 23.

27. (Currently Amended) A receiving apparatus, comprising:

an interface which receives a transmission packet which contains a transmission path header in which additional information is described and data blocks;

transmission path header separator means which separates said transmission packet into said transmission path header and said data blocks;

additional information extracting means which extracts said additional information from said transmission path header;

data packet generating means which generates from said data blocks a data packet which is obtained by combining one or more of said data blocks; and

additional information inserting means which adds or inserts said additional

information to said data packet and outputs as an output packet the data packet together with said additional information of ~~one~~ a type of data format which can be ~~be~~ processed by an application simultaneously,

~~characterized in that~~wherein said application processes the ~~output~~ packet ~~outputted~~output from said additional information inserting means.

28. (Currently Amended) The receiving apparatus of Claim 27, ~~characterized in that~~wherein said data packet is formed by a source packet header and a transport packet in MPEG2 data.

29. (Currently Amended) The receiving apparatus of Claim 27 or 28, ~~characterized in that~~wherein said additional information inserting means adds said additional information to ~~the~~a beginning or an end of said data packet.

30. (Currently Amended) The receiving apparatus of Claim 28, ~~characterized in that~~wherein said additional information inserting means inserts said additional information to said source packet header.

31. (Currently Amended) A receiving apparatus, comprising:

an interface which receives a transmission packet which contains a transmission path header in which additional information is described and data blocks;

transmission path header separator means which separates said transmission packet into said transmission path header and said data blocks;

additional information extracting means which extracts said additional information from said transmission path header;

data packet generating means which generates from said data blocks a data packet which is obtained by combining one or more of said data blocks;

source packet header separator means which separates said data packet into a source packet header and a source packet; and

additional information inserting means which adds or inserts said additional information to said source packet or replaces other data of said source packet with said additional information, and outputs as an output packet the source packet together with said additional information of ~~one~~ a type of data format which can be ~~be~~ processed by an application simultaneously,

~~characterized in that~~wherein said application processes the ~~output~~ packet ~~outputted~~output from said additional information inserting means.

32. (Currently Amended) The receiving apparatus of Claim 31, ~~characterized in that~~wherein said source packet is a transport packet in MPEG2 data.

33. (Currently Amended) The receiving apparatus of Claim 32, ~~characterized in that~~wherein said additional information inserting means adds said additional information to ~~the~~a beginning or an end of said transport packet.

34. (Currently Amended) The receiving apparatus of Claim 32, ~~characterized in that~~wherein said additional information inserting means replaces a sync byte of said transport packet with said additional information.

35. (Currently Amended) The receiving apparatus of any one of Claims 27 or ~~28 or 30 through 34~~31, ~~characterized in that~~wherein said interface is an IEEE1394 interface, and said ~~transport~~transmission packet is an isochronous packet.

36. (Currently Amended) The receiving apparatus of any one of Claims 27 or ~~28 or 30 through 34~~31, ~~characterized in that~~wherein said additional information is copyright information.

37. (Currently Amended) The receiving apparatus of ~~any one of Claims 27 or 28 or 30 through 34, characterized in that~~Claim 35, wherein said additional information is described in an SY area of ~~an~~said isochronous packet.

38. (Currently Amended) A ~~data~~ sending apparatus, comprising:

additional information separator means which, upon receipt of an input packet of ~~one~~a type of data format which can be processed by an application simultaneously, retrieves ~~said~~ additional information which is added or inserted to a data packet ~~which forms~~, said data packet and said additional information forming said input packet;

data block generating means which generates one or more data blocks from said data packet;

transmission packet generating means which executes predetermined processing on said data blocks, inserts said additional information at a predetermined location in said data blocks, and ~~accordingly~~ generates ~~said~~a transmission packet; and

an interface which sends said transmission packet.

39. (Currently Amended) The sending apparatus of Claim 38, ~~characterized in that~~wherein said data packet is formed by a source packet header and a transport packet in MPEG2 data.

40. (Currently Amended) The sending apparatus of Claim 38 or 39, ~~characterized in that~~wherein in said input packet, said additional information is added to ~~the~~a beginning or an end of said data packet.

41. (Currently Amended) The sending apparatus of Claim 39, ~~characterized in that~~wherein in said input packet, said additional information is inserted to said source packet header.

42. (Currently Amended) A sending apparatus, comprising:

additional information separator means which, upon receipt of an input packet of ~~one~~a type of data format which can be processed by an application simultaneously, ~~constructs said input packet and~~ retrieves ~~said~~ additional information~~, from a transport packet which includes~~ said additional information either 1) added~~,~~ or inserted to the source packet or 2) ~~replaced~~replacing other data of said source packet, said source packet and said additional information forming said input packet;

data packet generating means which combines a source packet header with said ~~transport~~source packet to ~~thereby~~ generate a data packet;

data block generating means which generates one or more data blocks from said data packet;

transmission packet generating means which executes predetermined processing on said data blocks, inserts said additional information at a predetermined location in said data blocks, and ~~accordingly~~ generates ~~said~~a transmission packet; and

an interface which outputs said transmission packet.

43. (Currently Amended) The sending apparatus of Claim ~~42, characterized in that~~52, wherein, in said input packet, said additional information is ~~obtained by replacing~~allocated to a position of a sync byte of said transport packet ~~with additional information~~.

44. (Currently Amended) The sending apparatus of Claim ~~42, characterized in that~~52, wherein in said input packet, said additional information is ~~obtained by adding said additional information~~added to ~~the~~a beginning or an end of said transport packet.

45. (Currently Amended) The sending apparatus of any one of Claims 38 or ~~39 or 42 through 44, characterized in that~~42, wherein said interface is an IEEE1394 interface, and said ~~transport~~transmission packet is an isochronous packet.

46. (Currently Amended) The sending apparatus of any one of Claims 38 or ~~39 or~~ 42~~ through44~~, ~~characterized in that~~wherein said additional information is copyright information.

47. (Currently Amended) The sending apparatus of ~~any one of Claims 38 or 39 or 42 through 44, characterized in that~~Claim 45, wherein said additional information is described in an SY area of ~~an~~said isochronous packet.

48. (Currently Amended) A medium which can be read on a computer and which holds a program for making a computer execute all or some of the respective means or the respective structural elements which form the receiving apparatus or the sending apparatus according to any one of Claims 27 or 28 or ~~30 through 34~~31 or 32 or 38 or 39 or 42 ~~through 44~~or 52.

49. (Currently Amended) An aggregation of information which is a program and/or data for making a computer execute all or some functions of all or some means of the invention according to any one of Claims 27 or 28 or ~~30 through 34~~31 or 32 or 38 or 39 or 42 ~~through 44~~or 52.

50. (New) The receiving apparatus of claim 28, wherein said additional information inserting means replaces a sync byte of said transport packet with said additional information.

51. (New) The sending apparatus of claim 39, wherein, in said input packet, said additional information is allocated to a position of a sync byte of said transport packet.

52. (New) The sending apparatus of claim 42, wherein said source packet is a transport packet in MPEG2 data.